TECHNICAL BOOK REVIEW INDEX

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JOHN F. HARRIGAN, *Editor*

Volume 8 **December, 1942** **Number 10**

THE purpose of the Technical Book Review Index is primarily to identify reviews in current scientific, technical, and trade journals; secondarily, when feasible, to quote from these reviews. In the evaluation of scientific and technical books, reviews constitute the best existing source of information. The service of the Technical Book Review Index is thus in the field of evaluation, rather than in competition with existing publications which announce new and forthcoming books, list books by subjects, or supply bibliographic information. Each quotation immediately follows the name of the journal from which it is taken. Obviously, these brief extracts, detached from the context, must not be accepted as conclusive. Except for the correction of obvious errors, the bibliographic information is as given in the reviews. It is, therefore, in many cases incomplete and in some cases probably inaccurate.

Adams, Roger. See **Organic** reactions.

Advances in internal medicine. v.1, edited by J. Murray Steele. Interscience Publishers, New York, $4.50.

Ohio state medical journal, Oct. 1942, p.986. ¼ col.

"Represents an attempt to present practical, informal summaries of progress in special parts of this broad field. The style is simple and intelligible to any physician, and the papers for the most part represent the opinions of a particular individual who has made contributions to the subject under discussion. This book and the principle on which it is built appeals very much to your reviewer and he hopes that it receives warm welcome by the American Medical Profession as a partial solution of the problem of keeping up to date."

Alexander, E. J. Succulent plants of new and old world deserts. 64p. New York Botanical Garden, New York, 50c.

Natural history, Sept. 1942, p.108. ⅛ col.

"A series of articles from the Journal of the New York Botanical Garden, together with an article on the culture of succulent plants, has been brought together in a most attractive booklet. The numerous illustrations are from exquisite photographs." ***Clyde Fisher.***

Nature magazine, Oct. 1942, p.442. 9 l.

"Will be heartily welcomed by enthusiasts for this group of plants . . . Covers the cactuses of America; South African and other Old World succulents; century plants and other New World dwellers, and includes directions for home culture. There are illustrations of one hundred of the 350 species treated."

American Society of Tool Engineers. Advanced blueprint reading. 300p. New York State Education Dept., Albany, N. Y.

Modern machine shop, Oct. 1942, p.366. ½ col.

"The book, with a few other monographs, will complete the national defense training project of educational literature prepared under the supervision of the New York State Education Department and distributed with the cooperation of the A.S.T.E."

Steel, Oct. 5, 1942, p.281. ¼ col.

Asbury, Herbert. The golden flood; an informal history of America's first oil field. 339p. 1942. Knopf, New York, $3.50.

Mining and metallurgy, Oct. 1942, p.516. 1⅛ col.

"Account of the development of Pennsylvania's first oil field. Informal it is, indeed, and there are chapters on 'Sin Among the Derricks,' the exploits of Benedict Hagan (or Ben Hogan, as his name is variously given), and the great Benninghof robbery, as well as one on the career of Coal Oil Johnny, but these are sandwiched between three chapters which begin with the earliest history of petroleum, relating in careful and apparently accurate detail the events which led up to the successful completion of the first drilled well, and two concluding chapters which chronicle the developments up to and including the rise of John D. Rockefeller and the organization of Standard Oil of Ohio." *T. T. Read.*

Baker, Edward. First course in mathematics. 295p. $3.

Combustion, Oct. 1942, p.51. ½ col.

"An excellent medium of mathematics instruction compiled to meet the needs of students of engineering and the physical sciences . . . Follows the traditional plan of proceeding from less difficult to more difficult subjects and the study of analytic geometry is postponed to the latter part of the book . . . The scope . . . may be ascertained by the fact that a chapter on the calculus is included . . . Contains 22 cogently written and adequately illustrated chapters. The topics contained in each chapter are subdivided into pertinent sections, most of which are followed by numerous exercises relating to the subject discussed . . . Includes a 5-page index."

Blair, Thomas A. Climatology. Prentice-Hall, New York, $5.

Natural history, Oct. 1942, p.165. ⅛ col.

"A concise discussion of the climates of all parts of the world . . . A book which from the viewpoint of the non-specialist is easily understandable, fully readable, and nevertheless almost encyclopedic in content. The subject is, in fact, the entire field of climates.—the agents which comprise them, the factors which influence them, their effect on agriculture, architecture, etc., and lastly a summary of the climates of the whole world. The compaction of all this material into a single volume, written in non-technical terminology and style is a monumental undertaking. Doctor Blair has succeeded in his attempt to achieve this goal." *H. E. Vokes.*

Bourne, Geoffrey, ed. Cytology and cell physiology. 296p. 1942. Oxford Univ. Press, London, 20s. net.

Nature, Sept. 26, 1942, p.362. 2½ col.

"A collection of essays by nine collaborators on a variety of topics almost all of which could be included under a heading such as aspects of

cell structure and physiology in animals. Each essay has an introduction and most end with a conclusion. They could be read with equal profit in any order. The matter ranges from an eye-witness account of fertilization in a sea-urchin . . . to the biochemical details of digestion in the grub of the clothes moth . . . From the pure physics of protein monolayers . . . to the distribution of mineral components in the walls of the blood-vessels of human patients suffering from arterio-schierosis." *I. Manton.*

Britton, Hubert T. S. Hydrogen ions; their determination and importance in pure and industrial chemistry. Ed.3, revised. 2v. v.1, 420p.; v.2, 442p. 1942. Chapman & H., London, 36s. net.

Chemical age, Oct. 10, 1942, p.321. ½ col.

"The first volume is concerned primarily with the general theory and methods of *p*H measurement, while the second volume deals with the application of *p*H work to chemistry, both pure and applied . . . The very full literature references throughout the monograph round it off, and ensure its prime importance to all those chemists who must take account of hydrogen-ion concentration in their work."

Chemical trade journal, Oct. 9, 1942, p.318. 1 col.

"The first volume deals with the general theory of the subject, the principles and working details of the hydrogen and other electrodes, its application to volumetric analysis, and, what is still of greatest importance to the majority of industrial chemists, the use of indicator papers and other colorimetric methods for the determination of *p*H . . . The second volume deals chiefly with the part played by hydrogen ions in chemistry and its numerous technical processes in which slight changes in the acidity or alkalinity of the solutions used have a pronounced influence on the operation of the process . . . May confidently be recommended."

Brown, F. E. Short course in qualitative analysis. Ed.2, revised. 337p. Appleton, New York, $2.60.

Drug and cosmetic industry, Sept. 1942, p.311. ⅔ col.

"The accumulation of new data and the modification of theories have been so extensive since the First Edition of this work 10 years ago, that revision required a rearrangement of chapters and complete rewriting of the major part of the text. The section on theory now discusses the structure of atoms, the nature of the solid state, limitations on the significance of the terms molecule and valence, the Debye-Huckel theory of ionization, Bronsted's theory of acids and bases, and the hydronium ion and amphiprotic behavior. The analytical procedures have been written for semi-micro samples, but provision has been made for easy translation to the macro scale. Each procedure has been shortened so that it includes directions only, but notes follow each procedure . . . At the back of the book is a series of report blanks for use in the laboratory."

Brown, Frank L. Engineering mechanics. Ed.2. 500p. Wiley, New York, $4.

Power, Nov. 1942, p.188. 10 l.

"States and explains principles in words, insofar as possible, rather than formulas, a technique that aids greatly in understanding the laws of forces, stress, acceleration and inertia. Of the many problems, answers are given to about half."

Product engineering, Oct. 1942, p.611. ⅓ col.

"Has undergone changes in the manner of presentation, particularly to put greater emphasis on the solution of problems expressed in words rather than symbols fitting memorized formulas . . . Illustrations are all new. The author has tried to give enough explanation and amplification of each subject to enable the student to progress understandingly with a minimum of outside aid . . . Divided into two parts, the first devoted to statistics and the second to kinematics and kinetics, each covering the usual subjects to be found in most textbooks on this subject."

Buerger, M. J. X-ray crystallography. 531p. 1942. Wiley, New York, $6.50.

American journal of science, Oct. 1942, p.748. 1 p.

"This book has long been awaited by experimenters in X-ray crystallography, especially those making use of moving-film methods. It brings together for the first time under a single cover widely scattered original material, plus a large amount of material never before presented. The subject matter . . . is confined to methods of investigation utilizing a single crystal and monochromatic X-rays . . . Several features of the book make it unusually lucid. Much of the important data is placed in tabular form; numerous, well-designed drawings greatly clarify difficult points in the discussions; when equations are derived, sufficient intermediate steps are included to allow the reader to follow the derivation without too great difficulty; lists of literature at the end of each chapter are conveniently arranged under subject headings . . . Fills a wide gap in the field of X-ray crystallography, and all experimenters in this type of work are greatly indebted to Professor Buerger for producing this extremely useful piece of work." *George Switzer.*

Review of scientific instruments, Oct. 1942, p.456. 1⅔ col.

"The object of the author is to present adequately . . . the theoretical background and practical applications of the procedures for determining the spatial pattern of a crystal, together with the theory and practice of the moving film methods which greatly reduce the indeterminateness of the analysis. But this book does more than just that, for it presents the direct and reciprocal lattice theory necessary for the understanding of these methods, with particular emphasis on the geometry of oblique cells and their reciprocals, together with a discussion of the stationary film methods. This object is attained more thoroughly than has been heretofore accomplished by any English language volume in this field . . . This clear presentation of the older and newer methods of attack in crystal structure investigations, together with their theoretical foundations, performs a highly useful service for workers in all branches of the x-ray crystallographic fields." *Victor Hicks.*

Bush, George F. Reading engineering drawings. Wiley, New York, $2.

Professional engineer, Sept. 1942, p.44. 11 l.

"A well written book teaching the reading of engineering drawings and of their reproductions in a clear concise manner. An excellent textbook which should be widely useful. Modern tables and approved standards and symbols are included, and it is notable that leading manufacturing concerns have cooperated with the author in supplying many of the drawings."

Chadwick, Henry D., & **Pope,** A. S. Modern attack on tuberculosis. 95p. 1942. Commonwealth Fund, New York, $1.

American journal of nursing, Oct. 1942, p.1223. ⅔ col.

"For every physician, nurse, social worker, public health officer and citizen interested in the control of a communicable disease, this book is a 'must.' Its content makes possible a grasp of the significant principles underlying successful control of tuberculosis and through the simplicity with which these principles are discussed the goal becomes a possible achievement. There are only six chapters (and a bibliography), all direct and clear, covering the epidemiology of tuberculosis, diagnostic treatment, and case finding procedures. The final chapter is an outline for a community campaign which achieves the impossible, namely, of being applicable to rural or urban conditions, on county, city, or village levels." *E. M. S.*

Chandler, William Henry. Deciduous

orchards. 438p. 1942. Lea, Philadelphia, $4.50.

Botanical gazette, Sept. 1942, p.188. ⅛ col.

"This volume adds to the discussion of the usual list of deciduous fruit trees such others as mulberry, fig, persimmon, papaw, pomegranate, jujube, walnut, hickory, hazelnut, chestnut, pistachio, and tung. Although the treatment of some of these is brief, there is at least an establishment of their place in American horticultural textbooks . . . The whole treatment resolves itself into an effective ecological treatise on the culture of fruit trees . . . Every teacher will be interested in the author's ideas on teaching as presented in the preface." *E. J. Kraus.*

Chapple, Eliot Dismore, & **Coon,** C. S. Principles of anthropology. 718p. 1942. Holt, New York, $3.75.

Quarterly review of biology, Sept. 1942, p.260. 1¼ col.

"Guided by the latest views of modern anthropology the authors of this scholarly work have succeeded in supplying a much needed, up-to-date and comprehensive textbook of 'human relations', of great service to students as well as teachers. The book will also be very stimulating to historians and instructive for biologists, interested in behavior. The authors have wisely limited their attention to facts directly ascertainable from observations and have selected and arranged their objective descriptions in a clear and orderly manner, leading to amply supported and often novel deductions . . . The appendix contains an excellent reading list of 70 titles, a useful glossary, needed in view of the specialized definitions of many words not in common use, and a detailed index."

Chester, K. Starr. Nature and prevention of plant diseases. Blakiston, Philadelphia, $4.50.

Chemurgic digest, Oct. 15, 1942, p.147. ⅛ col.

"An authentic book concerning the practical aspects of plant disease control, presenting the essential facts of plant pathology. The various types of plant diseases are discussed in detail, their causes and results. Special attention is given to these causes, including the history and distribution, symptoms and signs and the effects of environment. Each disease is carefully recorded and the control methods advocated . . . A basic manual for agricultural students, county agents and all others concerned with crop production. There are over two hundred illustrations."

Clark, William A., & **Plehn,** Brainerd. Materials testing and heat-treating. 132p. Harper, New York, $1.75. (Rochester technical series.)

Machinery (New York), Oct. 1942, p.226, 228. ⅛ col.

"One of a series developed at the Rochester Athanaeum and Mechanics Institute as part of its program for developing teaching material that is practical in nature and closely related to the requirements of various jobs in industry. The purpose . . . is to offer a series of laboratory exercises on materials testing and heat-treating typical of commercial tests. Among the tests covered under the section Materials Testing are tensile, shear, torsion, hardness, fatigue, ductility, impact, etc. In the Heat-Treating section, the procedure and apparatus required for open-flame hardening, determining critical points in steel, microscopic examination, carburizing, cyaniding, hardening and tempering, etc., are described."

Professional engineer, Sept. 1942, p.47. 7 l.

"This book has for its program the development of teaching materials which are practical in nature and closely related to the various jobs in industry. A well written book for engineers and those engaged in the branch of industry treated."

Clift, G. D., & **Federoff,** B. T. Manual for explosives laboratories. Ed.2. 230p. 1942. Lefax, Inc., Ninth and Sansom St., Philadelphia, $2.

Chemist, Sept. 1942, p.206. ⅔ col.

"Covers the analysis of acids, raw materials and finished products used in TNT, nitroglycerine, etc. The purpose . . . is to make it easier to train new personnel in the explosives industry. New material, including short cuts and modifications of usual analytical procedures, is given . . . A bibliography on explosives other than TNT is an additional feature. This manual has been so well accepted that the first edition, completed June first, has been sold out. The second edition slightly revised, is now available . . . Printed in loose-leaf form."

Journal of chemical education, Nov. 1942, p.552. 9 l.

"With the increasing demand on the Military Explosives Industry of the current war effort, has come the necessity for training chemists as specialists in explosives. The authors have published methods and modifications used in their own laboratory to assist in this training program, feeling that laboratory secrets should be dispensed with in an emergency . . . Published in handy loose leaf form, allowing the addition of sheets as they are issued, as well as ease in the addition of revisions and personal notes."

Craig, Charles Franklin. Laboratory diagnosis of protozoan diseases. 349p. 1942. Lea, Philadelphia, $4.50.

Quarterly review of biology, Sept. 1942, p.279. ½ col.

"This excellent book is intended as a guide to diagnosis of protozoan diseases particularly for the less expert physician and laboratory technician. As such it serves its purpose admirably . . . Of particular value are the suggestions made as to diagnostic procedures to be used by laboratories of limited facilities . . . Well and amply illustrated with drawings and photographs of all the organisms mentioned. Considerable care was used to show the various forms which each organism may take . . . Divided into six parts. The first deals with amebiasis and flagellate infections; the second with the leishmaniases; the third with the trypanosomiases; the fourth with coccidiosis; the fifth with the malaria plasmodia; and the last with balantidiasis. There is an excellent list of references and both an author and a subect index."

Cruickshank, Allan D. Birds around New York City. 489p. 1942. American Museum of Natural History, New York, $1.75. (American Museum of Natural History, handbook no. 13.)

Audubon magazine, Sept.-Oct. 1942, p.313. 2⅔ col.

"To those of us who have known that this book was in preparation, the finished product has surely exceeded any reasonable hopes entertained in advance . . . Should be in the hands of all serious students of birds of the eastern United States, and as a model must be consulted by all persons preparing similar faunistic studies. It sets a new standard for such studies, and I would not hesitate shamelessly to imitate its many excellent features." *Ludlow Griscom.*

Auk, Oct. 1942, p.592. 1¼ col.

"An exceedingly attractive volume, full of previously unpublished information, to which we will all have frequent occasion to refer. It reflects not only the author's field experience and knowledge of local birds but something of his dynamic personality, and can be read with pleasure from cover to cover. The numerous photographs of birds in nature with which it is illustrated are chosen for their beauty." *J. T. Nichols.*

Natural history, Sept. 1942, p.108. ⅔ col.

"This long-needed volume was compiled from a vast amount of data supplied by some hundreds of observers . . . It contains an accurate summary of the available information on the bird life around New York City . . . The illustrations are fine examples of excellent photography . . . Should have a long and useful career and with-

out question should be in the hands of everyone who is at all interested in the birds of New York City and the surrounding country." *John T. Zimmer.*

Dampier, William Cecil. History of science and its relations with philosophy and religion. Ed.3. 574p. 1942. Cambridge Univ. Press, London, 25s. net.

London, Edinburgh & Dublin philosophical magazine, Sept. 1942, p.701. ¾ p.

"No drastic changes have been made in the original text, but a number of minor modifications have been made in the course of the revision, and some references have been added. There is a new 50-page chapter carrying the story of the development of science over the last ten years. The new chapter . . . deals with a wide range of topics, among them alloys and solutions, the nuclear atom, geophysics, enzymes, vitamins, viruses, genetics, and Eddington's philosophy of the physical sciences. It is a chapter in which a reader may catch exciting glimpses of fields other than those with which he is familiar, and he will be grateful to the author for writing it." *E. C. S.*

Proceedings of the Physical Society, Sept. 1, 1942. p.467. 1⅘ p.

"The preface assures us that this is, in effect, a new book. It is at the same time a third edition and has the advantage which comes from revision and enlargement. But phrases like 'in this year 1929' do occur here and there, and suggest that it has not lost all traceable likeness to the second edition (1930). The decade 1930 to 1940 is covered by the addition of an eleventh chapter, and as the work begins with the scientific thought of the ancient world it can be easily imagined what a stupendous task has been undertaken. But this in itself gives little idea of what has been attempted, for to the history of science is joined the development of philosophic ideas, which bulk quite largely; and, as if this were not enough, considerable space is devoted to the discussion of religion . . . An extremely interesting and suggestive work." *H. C. P.*

Davey, Reginald. Measurement of trees. 236p. 1942. The Forest Press, Nutley, Sussex, England, 21s.

Nature, Sept. 19, 1942, p.333. 1 col.

"Mr. R. Davey tells us that the work is the outcome of three years research into British commercial methods. 'It is', he says, 'the first systematic study of the ocular system of measuring growing trees.' His laudable object was a simplification of methods of measuring trees and woods for sale, 'so that the exercise of care can secure results at present attainable only after years of practice'. One of the chief objects of the research work was the much-vexed question of 'taper' in the bole . . . Well illustrated with plates and text-figures, and its get-up, in these days, is a credit to publisher and printer." *E. P. S.*

Denny, Grace. Fabrics. Ed.5, revised 202p. c1942. Lippincott, Philadelphia, $2.50.

Practical home economics, Nov. 1942, p.410. ½ col.

"*Fabrics and How to Know Them* was first published in 1923. It was superseded in 1936 by *Fabrics* which has now been revised to include the many recent changes in textile products. More illustrations have been added; old cuts replaced with new ones; trade practice rules of the FTC are brought up-to-date and a list of trade terms for fabrics and finishes is also given. This is an essential handbook for clothing classes in both high school and college."

Rayon textile monthly, Oct. 1942. p.92. ⅔ col.

"A book, which in its earlier editions was known as 'Fabrics and How to Know Them' . . . The author arranged the contents into 6 main chapters titled: Fabric Identification; textile terms and definitions, (alphabetically arranged) to which the greater part of the book is devoted. This is followed by a classification of fabrics by structure and trade names. Then comes textile tests, which are dealt with somewhat in an elementary way, but sufficiently complete to serve the average teachers of clothing and textiles in colleges and schools. The author then discusses labeling and its control, followed by references and a list of books. An excellent book for advertising agents, students and women who have a general interest in textiles."

DeVette, W. A., & **Kellogg,** D. E. Blueprint reading for the metal trades. 132p. Bruce, Milwaukee, Wis., $2.50.

American machinist, Oct. 15, 1942, p.1210. ⅝ col.

"A carefully worked out method of learning to read blueprints and to make freehand sketches, by which a mechanic can convey information and sometimes clarify a drawing for himself. The material is arranged in order of difficulty, so that the student proceeds in easy stages from simple sketches on through increasingly difficult problems . . . Well illustrated, and it is necessary for the student to understand the data conveyed by each drawing in order to answer the questions given with each assignment."

Foundry, Oct. 1942, p.150. ⅓ col.

"Although the book might be employed for private study, it is designed primarily as a text book for class use presided over by a teacher . . . Text and illustrations begin with simple shapes and advance gradually and progressively to a deliniation of intricate shapes and assemblies. The following chapter heads indicate the scope of the work: Blueprinting process, working drawings, sketching, reading a drawing, invisible edges, oblique surfaces, cylindrical objects, sectional views, screw threads, reading dimensions, assembly drawings, finish and finish marks, limits tolerances and allowances, gearing, miscellaneous reading problems."

Modern machine shop, Nov. 1942, p.334. ¼ col.

"Designed to provide mechanics with a means for reading or interpreting industrial drawings supplied to them in the form of prints of various color combinations."

Doane, Foster Baird. Principles of magnaflux inspection. Ed.2. 288p. 1942. Magnaflux Corp., 5908 Northwest Highway, Chicago.

Aviation, Oct. 1942, p.276. ⅓ col.

"Changes from the first edition . . . are principally the addition of new photographs, enlargement of the bibliography, and new material on detectable defects, interpretation, and welding. Beginning with an introduction on the background and advantages of the method, the succeeding chapters are on magnetism, the Magnaflux Method, magnetizing methods, magnetizing current characteristics, the inspection medium, detectable defects, non-detectable defects, false indications, weld inspection, demagnetization, interpretation of indications. Aircraft inspection, which is specially treated in another volume, is not the major subject of this more general book."

Dunlap, Orrin E., jr. The future of television. Harper, New York, $3.

Editor & publisher, Oct. 24, 1942. p.34. ⅞ col.

"Mr. Dunlap, manager of the department of information of RCA. and radio editor of the *New York Times* from 1922 to 1940, is a former amateur wireless operator, commercial radio operator and U. S. Navy operator in the first World War. 'The Future of Television' is his eighth book pertaining to radio."

Ehret, William F., and others. Physical science. 639p. 1942. Macmillan, New York. $3.90.

Journal of the Franklin Institute, Oct. 1942. p.407. ½ p.

"The scientific method of studying a problem is emphasized, and its usefulness is pointed out for clear, logical, unbiased, and accurate thought in any field of human endeavor. In all there

are twenty-five chapters, generally proceeding through the nature of matter, mechanics and heat, the atmosphere and weather, the elements of chemistry, geology, time wave motion, electricity, light, and sound . . . It is especially shown how knowledge of one field is useful in another. The last chapter is devoted to a discussion on the nature of scientific reasoning, which is essentially an illumination of the truthfulness of scientific thought . . . Profusely illustrated and well presented. The connection of subjects and logical progression is especially noteworthy. No hesitation is made to use mathematics . . . although there is no intent to furnish fundamental training to specialists or technicians in any of the fields covered." *R. H. Oppermann.*

Review of scientific instruments, Oct. 1942, p.452. 1⅓ col.

"Attempts in a single volume to encompass several fields of physical science . . . One of the chief objects of a book in physical science must be to present the material in such a manner as to make apparent to the student the overlapping and continuity of the various fields. It is our feeling that this particular book is weak on this point . . . We should like to comment especially upon the portion of the book which deals with physics. These chapters are exceptionally well written." *Francis G. Slack.*

Sky and telescope, Oct. 1942, p.16. ⅔ col.

"A book . . . which, in spite of its multitudinous authors, is a coherent whole, covering the entire range of sciences . . . It is not, however, written in the journalistic manner, as have been so many of our recent popular science survey books. In fact, it is not even a survey in the usual sense. Rather, it is like a collection of material from a score of textbooks, written in the academic manner, which makes it basically sound science . . . Well illustrated." *C. A. F.*

Engineering interpretation of the economic and financial aspects of American industry. v.4: The rubber industry. 56p. George S. Armstrong & Co., Inc., 52 Wall St., New York.

Canadian mining journal, Oct. 1942, p.667. 1 col.

"The most concise and scientific analysis of any problem that we have ever seen . . . A model of clear statement and vivid writing that carries interest to the last line. It covers first the present situation, and then naturally slides into the matter of synthetic rubber which is treated in a non-technical way so far as the scientific aspects of it are concerned. Production programmes, sources of supply, and costs are clearly defined. This naturally takes up a good part of the report. Reclaimed rubber has a section to itself, as do also crude rubber, and the rubber products industry of the United States . . . Concludes with 'A Look Ahead' . . . We understand that a limited number of copies of this valuable survey is available to responsible enquiries, and we heartily commend it to those who fall within that category."

Fahey, James C. Ships and aircraft of the U. S. fleet. 64p. Ships and Aircraft, 1265 Broadway, New York, $1.

Army ordnance, Sept.-Oct. 1942, p.333. ¼ col.

"Here, in one compact booklet, is packed more information about the fighting units and auxiliaries of the U. S. Navy than this reviewer has ever seen before between two covers . . . Replete with excellent photographs of the principal units of the various classes. All the ships of the Navy are listed by name and such pertinent data are given about each as name of builder, date ordered, date launched, and date commissioned. The dimensions, propelling machinery, and armament are also listed for many ships. Due to the war, the booklet is necessarily incomplete, but war losses are indicated up to May 6, 1942 . . . A very valuable handbook for those who want quick, authentic information about the ships and aircraft of our Navy." *R. E. L.*

Fairchild, L. H., & **Fairchild,** H. C. Cats and all about them. 231p. 1942. Judd, New York, $2.

Quarterly review of biology, Sept. 1942, p.268. ⅓ col.

"The authors . . . are a unique combination of cat lover and breeder and practicing physician and surgeon. They have recorded the results of their wide experience, with practically every breed of cat, with expertness and real understanding . . . Topics such as successful methods of selection, breeding, management, housing, training and habits of cats are taken up in some detail. Descriptions of common ailments, their recognition and medication, together with the treatment for disease and parasites are also fully treated. Numerous photographic illustrations of various breeds of cats accompany the text."

Fernald, H. T., & **Shepard,** H. H. Applied entomology; an introductory textbook of insects in their relation to man. Ed.4, revised. 400p. 1942. McGraw, New York, $3.75.

Journal of the New York Botanical Garden, Oct. 1942, p.255. ⅜ col.

"A highly desirable addition to entomological literature . . . The same general plan has been followed as in the earlier editions, the book being literally an introductory text with special reference to the practical or economic phases. The student has in this work an excellent guide to the various groups of insects, the representative species selected for discussion and illustration being the more common or the more noteworthy because of their injurious habits. This arrangement brings the accounts of related insects in the same chapter . . . The conservative position of the authors in regard to the newer insecticides is commendable. This book will be used by many students and should be on the shelves of libraries and of working entomologists throughout the country." *E. P. Felt.*

Findlay, Alexander. Introduction to physical chemistry. Ed.2, revised and enlarged. 582p. 1942. Longmans, New York, 15s.

London, Edinburgh & Dublin philosophical magazine, Sept. 1942, p.700. ⅜ p.

"This well-known and widely used introductory text-book has been increased in size by 90 pages. It has been thoroughly revised, and in parts rewritten in such a way that the new material has been skilfully grafted on to the old." *J. W. B.*

Proceedings of the Physical Society, Sept. 1, 1942, p.469. ⅓ p.

"The new material is distributed fairly generally throughout: notice should be made of two new short sections on *Elements of Crystallography* and *Molecular Dimensions and Configurations*. The number of problems has also been increased . . . Much of the discussion has been re-written and references . . . have been brought up to date . . . Discussion is general and descriptive, but it is, perhaps, a pity that there is so little of more precise treatment . . . The first edition provided a well-written introduction to the subject: the matter added to the new edition has brought it into line with recent developments, and increased its usefulness." *R. F. B.*

Transactions of the Faraday Society, Sept. 1942, p.431. ⅞ p.

"Almost every chapter shows evidence of much careful and thorough revision; the first chapter, an outline introduction to atomic theory, is nearly half as long again as before, and much improved; the chapter on colloids now includes brief accounts of the ultracentrifuge, membrane equilibria, and emulsions . . . All the old excellent features have been retained, the clear, scholarly writing which we have learned to expect from the author, the careful and concise historical references . . . and the judicious mixing of theory and description of experimental methods; and in the new edition references to more advanced and specialised books are much

more numerous than before . . . As a clear, very comprehensive, yet elementary survey of a very large part of the science, this book would be difficult to surpass. At its level of difficulty, it is without equal among English textbooks. The price has unfortunately been doubled since the last edition, but it is still very good value." *N. K. A.*

French, Herbert J. Alloy constructional steels. 294p. 1942. American Society for Metals, Cleveland, $4.

Machine design, Nov. 1942, p.104. ⅓ col.

"As a comprehensive review of the utilization of alloy steels and as a guide to their selection, this book should be of interest to the engineer as well as to the metallurgist. Concerned with the so-called 'constructional' steels as opposed to tool and die steels, the book covers both unhardened and heat-treated steels, and the effects of alloying elements on behavior at sub-atmospheric and elevated temperatures and on resistance to wear and corrosion. Compositions of the SAE and AISI steels are given in appendixes . . . NE steels . . . are not discussed. However, some of the low alloy steels for which data are given have compositions closely similar to certain of the NE steels."

Metals and alloys, Oct. 1942, p.832. ⅜ col.

"Several chapters . . . are devoted to the less readily appraised characteristics of steels such as Low Temperature Impact, Elevated Temperature Strength, Wear Resistance and Corrosion Resistance. By reading these chapters the engineer can learn how complicated the metallurgical aspects really are in evaluation of this class of properties . . . Definitely written to present a broad picture rather than to be a reference work on the subject . . . Can be recommended to engineers who wish to familiarize themselves with the problems which the metallurgist has to solve in reducing scientific investigation to useful specifications . . . Can also be recommended to those metallurgists who want to follow in detail the efforts to establish a scientific basis for the selection of alloy combinations in steel." *A. J. Herzig.*

Fuson, Reynold C., & **Snyder,** H. R. Organic chemistry. 506p. 1942. Wiley, New York, $3.50.

Canadian chemistry and process industries, Sept. 1942, p.560. ⅜ col.

"Represents a year's course in organic chemistry for beginners as given at the University of Illinois . . . An excellent text and reference book."

Science, Oct. 2, 1942, p.320. ¾ col.

"Part I . . . is an initial course. It gives the student a bird'e-eye [sic] view of the general field of organic chemistry and familiarizes him with the principal classes of organic compounds . . . Part II . . . likewise covers the general field of organic chemistry, but with more emphasis upon details and especially upon the use of standard reactions in synthesis . . . At the end of most of the chapters, 'Problems and Suggested Readings' are given, and at the close of the book, in addition to the index, Appendix A discusses 'Nomenclature and Pronunciation,' and Appendix B, gives an extensive list of additional 'Problems and Questions for Review' . . . Constitutes an admirable first-year course, lucidly and logically presented, up to date, and is a good illustration of the excellent instruction given in this field at the University of Illinois. Paper, presswork and binding are first-class." *Marston Taylor Bogert.*

Gallardo, Alfonso Gonzalez. See **Gonzalez Gallardo,** Alfonso.

Gettens, Rutherford J., & **Stout,** G. L. Painting materials; a short encyclopedia. 333p. 1942. Van Nostrand, New York, $3.25.

Journal of chemical education, Oct. 1942, p.500. ¼ col.

"Significant information on the materials and processes of painting, including information resulting from recent studies in the fields of chemistry, microscopy, and physics . . . Arranged . . . in five sections—Mediums, Adhesives, and Film Substances; Pigments and Inert Materials; Solvents, Diluents, and Detergents; Supports; Tools and Equipment . . . Adequately cross referenced, and includes lengthy bibliographies for each section. The data were gathered, according to the authors, ' . . . for all who do work in the art—painters, teachers of painting, students, museum curators and conservators, paint chemists and analysts. There is much that will concern the museum worker and the paint analyst more than others—distinctions among chemical and physical properties, problems of conservation, and history of materials'."

Gonzalez Gallardo, Alfonso. Introduccion al estudio de los suelos. 1941. Mexican National Bank of Agricultural Credit, Mexico.

Soil conservation, Oct. 1942, p.93. 2 col.

"For the Mexicans the volume is a manual for both soil classification and efficient land use planning; other Spanish-speaking Americans will find in it an answer to the long-felt need for a Spanish text on modern soil science; but to us in the United States it is evidence that Mexico has passed another milestone in its agricultural and scientific history . . . To date only a comparatively small portion of the agricultural land of Mexico has been adequately classified. The task remaining is enormous, yet the current world situation demands rapid progress and thorough work. The services of experienced agronomists must be used with greatest efficiency and new men must be trained to assist in this vital task. Gonzalez's work is designed for the use of both groups of agricultural workers. For every phase of their work, detailed instructions are given. The experienced worker is told how to use his time efficiently, and what should be his daily accomplishment. For new workers the most minute details are included." *Lois Olson.*

Gray, Dwight E. Man and his physical world. 665p. Van Nostrand, New York. $3.75.

Rubber age, Oct. 1942, p.75. ⅔ col.

"Divided into six major sections, as follows: Man and the Universe; Man and the History of the Earth; Man and the Tools of Science; Man and Materials; Man and Energy; and Man Applies Science. There is also an introduction to science and the scientific method, which includes a definition of science, a description of the scientific method, and the purposes of science . . . Includes a reading list of recommended books, pamphlets, reports, etc . . . and has a complete subject index. Although intended for the college student, it makes interesting reading for the layman as well."

Gruse, William A., & **Stevens,** D. R. Chemical technology of petroleum. 733p. McGraw, New York. (Mellon Institute technochemical series.)

Crucible, Oct. 1942, p.184. ⅔ col.

"Constitutes a complete rewriting and up-to-date enlargement of an earlier treatise, 'Petroleum and Its Products' . . . The newer developments in polymerization, isomerization, alkylation, and solvent extraction and distillation, leading to the highly improved present-day fuels and lubricants are discussed in detail. Included are chapters on the origin, hydrocarbon and non-hydrocarbon constituents, physical properties, cracking, refining and production of petroleum. Also dealt with at length are thermodynamics and group reactions (halogenation, oxidation, hydrogenation, etc.) of hydrocarbons, motor and Diesel fuels, kerosene, lubrication, wax and petrolatum, fuel oils, asphalts and by-products derived from petroleum. An appendix gives the physical properties of some 600 hydrocarbons."

Petroleum world, Oct. 1942, p.48. ¾ col.

"The main sections of the book are well laid out, with the possible exception of the chapter on Production Chemistry by Dr. H. T. Kennedy. The chapter is well written, but appears out of

place in a book dealing largely with the technology of refining . . . The format . . . is good."

Guerrero, Antonio Perol, comp. New technical and commercial dictionary; Spanish-English and English-Spanish. 600p. 1942. Chemical Pub., New York, $10.

American aviation, Oct. 1, 1942, p.27. ⅛ col.

"A useful volume for those looking to closer relations with Latin America . . . Should be especially helpful to aviation personnel and companies whose outlook is spreading to the south of the United States and who now have, or will have, business relations with Spanish-speaking nations . . . Antonio P. Guerrero . . . is editor in chief of the Editorial Tecnica Unida, Brooklyn."

American journal of pharmacy, Sept. 1942, p.367. ⅔ p.

Bulletin of the Electrochemical Society, Inc., Oct. 1942, p.8. ⅔ col.

Drug and cosmetic industry, Oct. 1942, p.434. ¼ col.

India rubber world, Oct. 1942, p.92. ⅓ col.

"Each definition includes adequate and clear information, and a new arrangement of auxiliary words in relation to the definition of the fundamental word adds a definite usefulness to the value of the primary alphabetical arrangement. There are conversion tables of weights, measures, and monetary units for the English and metric systems."

Modern machine shop, Oct. 1942, p.346, 348. ⅔ col.

"An unusually useful reference work . . . Many new words and their meanings . . . which were not in existence a few years ago are listed. Each word has been carefully translated in accordance with the plan of the Royal Spanish Academy of Languages and checked in every way . . . Each definition includes as much information as possible."

Rubber age, Sept. 1942, p.546. ⅛ col.

"A new Spanish-English, English-Spanish dictionary containing more than 50,000 words used in the electrical, chemical, mechanical, marine, radio, mining, textile and other industries . . . Attempts to set a standard of terminology for all technical and commercial words and accordingly includes modern words which are peculiar to mechanized and motorized warfare, aviation, meteorology, etc . . . The definitions are concise and the type is clear and legible . . . Also contains conversion tables of weights and measures and monies alongside of the literal translations."

Haddon, J. D. Introduction to aeronautical engineering. v.3: Properties and strength of materials. 192p. 1942. Pitman, London, 8s. 6d. net.

Sheet metal industries, Sept. 1942, p.1336. 1⅛ col.

"Suffers several faults which prevent its whole-hearted recommendation . . . The parts are not of equal merit, the first, on materials, certainly not being as up to date as the author's intention given in the introduction. The outline of the fundamentals of physical metallurgy in the first two chapters, and the chapter on heat treatment (of steel) are, unhappily, and as is often the case in engineers' textbooks, of too summary a nature to be grasped by most students . . . The second, and major, part . . . is accurate and is on the conventional lines of works on strength of materials . . . In spite of this reviewer's criticism, the book remains a useful summary of information and is therefore worth improving in the next edition." *"Agricola."*

Hanovia Chemical and Manufacturing Company. Ultraviolet in science and industry. 24p. 1942. Alpine Press, Newark, N. J., 50c.

Chemical and engineering news, Oct. 10, 1942, p.1258, 1260. 1 col.

"Describes in a very brief manner a number of applications of ultraviolet light in science and in industry, principally those resulting from the production of fluorescence in different substances . . . The style is semi-technical and in parts reads very much like a catalog or descriptive bulletin issued by a manufacturer. It can be read with profit by nontechnical persons. A number of errors appear, a few typographical, and, more to be regretted, some errors in usage . . . The chief value of the booklet lies in its listing and brief description of the uses of ultraviolet radiation . . . More extensive works must be consulted for details." *O. S. Duffendack.*

Heldt, P. M. Torque converters or transmissions. The Author, Nyack, N. Y.

Automotive and aviation industries, Sept. 15, 1942, p.56, 60. ¾ col.

"The conventional geared transmission is dealt with strictly from a design standpoint, different possible lay-outs, desirable gear ratios, materials used and their heat treatment, and strength calculations being discussed in detail. In the case of the newer transmissions the treatment is somewhat more general, the principles of operation being explained and the advantages and disadvantages of the different types pointed out. In a final chapter a large number of current designs of geared transmissions for use in all types of motor vehicles from scooters to railcars are illustrated and described. The following list of chapter heads will give a good idea of the scope and contents of the book: Introduction; Friction Clutches; Automatic Clutches; Hydraulic Couplings; Over-running Clutches; Some Principles of Toothed Gearing; Sliding-Gear and Contant [sic]-Mesh Transmissions; Bearing Loads in Geared Transmissions; Planetary Transmissions; Electric Drive; Hydrostatic Transmissions; Hydro-Kinetic Torque Converters; Differential or Power-Shunt Transmissions; Inertia-Type Transmissions; Variable-Throw Transmissions; Automatic and Power-Controlled Stepped Transmissions; Pneumatic Transmissions; Geared Transmissions for Different Services."

Herod, Frank. See **Overton,** Louis J.

Hinds, Norman E. A. Geomorphology. Prentice-Hall, New York, $5.

Natural history, Oct. 1942, p.168. ⅔ col.

"Professor Hinds, a member of the faculty of the University of California, has presented here, in some detail, but in very readable style the essentials necessary to interpret the scenic picture, together with a multitude of specific examples illustrating the results of the interreaction of the various factors involved . . . Intended to serve as a textbook in the subject, but it should find a welcome place in the library of every lover of scenery, as well as of every amateur geologist. No branch of geology offers greater possibility for the use of beautiful photographic illustration; the more than 500 examples here, mostly chosen from the wealth of material offered within our own scenic country, add much to an already valuable work." *H. E. Vokes.*

Hoff, Ebbe Curtis, & **Fulton,** J. F. Bibliography of aviation medicine. 237p. 1942. C. C. Thomas, Springfield, Ill., $4.

Aeronautical engineering review, Oct. 1942, p.73. ⅓ col.

"As an example of careful research, painstaking compilation and clarity of printing this bibliography could well serve as a model for others . . . Just at this time when aviation medicine is becoming of such great importance in our war effort the utility of this bibliography will be of the greatest value to engineers as well as flight surgeons. It is an outstanding contribution to aeromedical research."

Aviation, Oct. 1942, p.276, 278. ½ col.

"This unusually valuable volume . . . contains 6,000 citations, drawn from 800 journals embracing the works of American, British, German, French, Italian, Japanese and Russian workers in this field. The . . . 14 sections . . . include: history and general aspects of aviation medicine; special physiology of aviation, a section divided into 14 sub-sections; special pharmacology; special psychology; aeromicrobiology, including bacteriology and immunology in aviation and

high altitudes; diseases and accidents in aviation and conditions simulating flight; selection and assessment of efficiency of flying personnel; training, performance and fatigue of flight personnel; protection of flight personnel, including preventive medicine and therapeutics of aviation; aviation and public health; organization of aviation medicine; special problems; general studies in aviation medicine and bibliographies."

Science, Oct. 16, 1942, p.361. ⅓ col.

"A timely and much-needed bibliography . . . This work was done under the auspices of the National Research Council Committee on Aviation Medicine, acting for the Committee on Medical Research of the Office of Scientific Research and Development . . . References are well classified according to subjects and there are many cross references . . . Unusual care has been taken with make-up and typography . . . This carefully prepared, comprehensive bibliography will prove invaluable not only for investigators of aviation physiology and medicine but also for the many physiologists working in related fields." *Eugene F. Du Bois.*

Hopkins, B. S. General chemistry for colleges. Ed.3. 758p. Heath, Boston, $3.80.

Chemical & metallurgical engineering, Sept. 1942, p.232. 10 l.

"Suitable for college courses in first year chemistry . . . Follows the usual textbook style and order of presentation of chemical fundamentals. Production and industrial uses of chemicals and metals are stressed wherever possible. Each chapter concludes with a number of problems and exercises."

Ibbetson, W. S. Preliminary mathematics for engineers. Ed.2. 170p. E. & F. N. Spon, London, 5s. 6d. net.

Transactions of the Institute of Marine Engineers, Sept. 1942, p.107. ⅛ col.

"The author's aim has been to give a good grounding in fundamental principles, so as to give the student a proper understanding and appreciation of the more advanced books available. It can be said that he has succeeded in his aim . . . Well written . . . compact, and there is a liberal supply of examples . . . at the end of each chapter. Answers are provided. While primarily intended for use in first-year classes in engineering and electrical trades courses, the book would also be admirably suited for adoption in junior technical schools."

Jensen, L. B. Microbiology of meats. 252p. 1942. Garrard, Champaign, Ill., $4.

Food industries, Oct. 1942, p.103. ⅓ col.

"Of practical value to those engaged in meat packing operations. The author . . . [is] chief bacteriologist of Swift & Co . . . It is not necessary to be a bacteriologist or chemist to profit from the information in this work, because in many instances, the import of technological fact is interpreted in terms of plant operations."

U. S. egg and poultry magazine, Nov. 1942, p.615. ⅔ col.

"A well-integrated and complete discussion of the industrial microbiology of meat foods . . . Material . . . includes: some effects of sodium nitrate on bacteria in meat; gaseous fermentation in meat products by the genus *bacillus;* bacteriology of green discolorations in meats; action of microorganisms on fats; a study of ham souring: ante-mortem and post-mortem studies on the bacteriology of normal tissues of swine; microbiology of beef; bacteriology of sausage; microbiology of bacon; control of microorganisms; bacteriology of spices, salt, sugar, paper and wood; a summary of food poisoning of bacterial origin."

Johnson, Ralph P. The steam locomotive. 502p. Simmons-Boardman, New York. $3.50

Combustion, Oct. 1942, p.51. ⅔ col.

"Ralph P. Johnson, Chief Engineer of the Baldwin Locomotive Works, has in this book met the need of a modern work on the theory and practice of the steam locomotive. He has gathered a great deal of factual material from authoritative sources and . . . this information is presented in a convenient and accessible form . . . Contains 71 tables and 83 line-cut drawings and charts. Six drawings of indicator reducing motions are included in a back cover pocket . . . Includes a bibliography and an 8-page index."

Machine design, Nov. 1942, p.102, 104. ⅓ col.

"Presenting in convenient form the essentials of steam locomotive design and operation, this book is of particular interest in view of the major role [sic] which rail transportation is playing in the war program. Information is given in concise and eminently practical form, free from unnecessary historical matter or academic discussion. Concerned with broader aspects, the book does not attempt to cover mechanical details . . . An indication of the amount of quantitative information given is the fact that there are 70 tables of data and 84 illustrations, mostly curve sheets or line drawings. Considerable space is devoted to the engineering problems of testing locomotives under service conditions, and a complete set of working drawings for an indicator rig is included in a pocket at the end of the book."

Keller, Ernest G. Mathematics of modern engineering. 3v. v.2. 309p. 1942. Wiley, New York, $4.

General electric review, Sept. 1942, p.543. ¾ col.

"The second volume of this well-known text develops those general physical principles of which those treated in Volume I are special cases. In particular, this volume is concerned with the broad principles that apply to discreet engineering systems, while a third volume under preparation will treat the analysis of continuous systems. Equal emphasis is laid on both processes of reduction of physical problems to mathematical equations and of their systematic solution . . . Chapters conclude with a detailed description of references. The copious examples worked out are the result of a careful selection based upon the composite opinions of numerous engineers and physicists, while the material included has been used not only in the Advanced Course in Engineering of the General Electric Company, but in graduate courses of several universities."

Journal of the Franklin Institute, Oct. 1942, p.405. ¾ p.

"The expressed purpose is to present those aspects of mathematics which the experience of a large manufacturing organization (General Electric Co.), in dealing with electrical and mechanical investigations, has found to be of most value to engineers. A second purpose is to present an introduction to the methods of mathematical engineering by the analysis of discrete physical systems . . . Reflects a careful selection of material for that which has direct bearing on the subject and the most usefulness . . . A good introduction to the new 'mathematical engineering' which provides a better means for the solution of engineering problems." *R. H. Oppermann.*

Power, Nov. 1942, p.134. ⅓ col.

"The second of three (projected) books of the kind of mathematics used by engineers and physicists in daily research and practice. The author proceeds to outline 'mathematical engineering' as the tool of all research and design in rotating machines, airplane motions, locomotive oscillations, vibration, aerodynamics, hydrodynamics, electrodynamics and elasticity. For the graduate student, a new collection of the math he will some day need; for abstract research, a valuable reference."

Professional engineer, Sept. 1942, p.46. ⅓ col.

"Should be in the library of every engineer."

Koenig, J. H., & **Earhart,** W. H. Literature abstracts of ceramic glazes. Industrial Publications, Chicago, $3.

Brick & clay record, Oct. 1942, p.22. ½ col.

"A compilation of literature such as [this]

. . . will save much time in book research and duplication of actual experimental work. It is wise to benefit by others' experiences, and the glaze abstracts are vast experiences of other fellows."

Ceramic industry, Oct. 1942, p.46, 48. 4½ col. includ.ng illustrations.

"A complete review of glazes in abstract form that fills a void that faced the men in the field. For their convenience many of the abstracts cover papers so completely that the entire story is told, making unnecessary any reference to the actual article . . . Divided into sections taking each publication individually, such as reports from the Journal of the American Ceramic Society from 1899 to 1940; CERAMIC INDUSTRY, 1923-1940; Ceramic Age 1922-1940; Transactions of the English [sic] Ceramic Society, 1901-1940, and 78 other periodicals and miscellaneous publications. Private company pamphlets are abstracted. Patents are listed. A section is devoted to glaze reference books and another to glaze bibliography . . . Carries a cross index . . . Every conceivable branch of ceramics will be interested in this book . . . A quick reference and . . . a complete answer to many problems . . . Should be in every ceramic library and in every laboratory."

Leighou, R. B. Chemistry of engineering materials. Ed.4, edited by J. C. Warner. 645p. McGraw, New York, $4.50.

Chemical & metallurgical engineering, Oct. 1942, p.183. ½ col.

"During the eleven years since this standard reference was last revised there have been many important changes in the engineering materials picture [which] . . . necessitated revision of the late Professor Leighou's book if it was to continue as a standard textbook for engineering students and as a convenient reference for practicing engineers . . . The task of rewriting, expanding important subjects and condensing some that today are less significant, was divided among seven members of the faculty of Carnegie Institute of Technology. Since no one individual could truly be called an expert in all the fields which this book covers, it gains in authoritativeness by this symposium approach to the revision problem. It will fulfill the purposes for which it was intended."

Chemurgic digest, Oct. 31, 1942, p.155. 9 l.

"The particular object . . . is to supply information concerning the chemical properties of the materials employed in building construction and operation, so that these materials might be used more intelligently and to a better advantage."

Levy, H., ed. Elementary mathematics. 1942. Nelson, London, 5s. net. (Nelson's aero science manuals.)

Journal of the Royal Aeronautical Society, Sept. 1942, p.237. ⅔ p.

"If the remaining books in this series are anything up to the standard of those already published students of the future can congratulate themselves that much of the horror of mathematics, in particular, will have gone . . . Professor Levy in just over 200 pages teaches the elements of Arithmetic, Algebra and Trigonometry, makes us familiar with the use of graphs and gives us a glimpse on the last page, of the meaning of integral calculus. His statements are clear and concise and he leads us up the mathematical garden in such an interesting way that we have no difficulty in realising that $p + s + d$ may equally stand for pigs plus sheep plus donkeys or for pansies plus syringas plus delphiniums . . . Professor Levy is to be heartily congratulated and one looks forward to his Advanced Mathematics in the same series."

Lewis, I. G. Back to better grass. 68p. 1942. Faber, London, 3s. 6d. net.

Nature, Oct. 3, 1942, p.392. ½ col.

"A brief but very useful and readable guide to success in the formation and management of pastures, or rather, leys . . . Useful chapters are given on the selection of seed of the right strains, on the time to sow, and whether to use nurse crops; and the book ends with a useful list of seeds mixture prescriptions for leys of various duration and classes of soil . . . Is very practical, and combines the valuable experience of the scientific man with that of a commercial man who was prepared to stake his career on the soundness of his advice. It is, perhaps, unusual to direct attention to a writer's experience, but the fact that the author set up in business as a 'consulting agrostologist'—the first business of its kind in the world—adds greatly to the value and interest of this book."

Lewis, W. B. Electrical counting; with special reference to counting alpha and beta particles. 144p. Cambridge Univ. Press, London, 10s. 6d.

Electrical review, Sept. 11, 1942, p.334. ½ col.

"Dr. Lewis has performed a difficult task very well indeed. It is to his credit that he has been able to get so much useful and fundamental information into the space. He indicates rather than develops the principles on which the whole subject is based and provides an excellent bibliography for further reference. The impression gained on reading the book is that the so-called purist has indeed to 'soil' himself thoroughly with such applied subjects as design and limitations of amplifiers, feedback and stabilisers, mixing circuits, triggered circuits, discriminators, and recording counters before he can really understand the technique of his measurements. All these find separate chapters in the book and are well treated. The remaining chapters deal with ionisation and ionisation chambers, coincidence counting and energy determinations of fast particles. On the whole, the author has produced a valuable book, and has certainly succeeded in whetting the appetite for more." *L. J.*

Lissitzyn, Oliver J. International air transport and national policy. 1942. Council on Foreign Relations, New York, $5.

Journal of the Royal Aeronautical Society, Sept. 1942, p.240. 1⅔ p.

"A valuable contribution to civil aviation history and should be studied by all those concerned with the future of civil aviation. It is not a story book, to be read at a sitting, but a massive compilation of facts, statistics, and events . . . Their arrangement is good. He writes from an American point of view . . . He looks at his subject from all angles. He explains why States must be interested in air transport, the economic factors in State aid, the nature of Governmental control, and how Governments have promoted (positively and negatively) air transport. He discusses monopolies and competition, the diplomacy of air transport and the freedom of the air. If one can offer a criticism it is that the large canvas has been filled in with so much detail that the basic structure of the picture has become a little obscured."

Low, A. M. Parachutes in peace and war. 228p. Gifford, London, 2s. 6d. net

Flight, Oct. 1, 1942, p.362. 11 l.

"One would hardly have thought that now it would have been possible to write a book of 228 pages about parachutes without either going into very technical details or repeating much of what other authors have written. Professor Low has, however, produced a very readable book about all aspects of the parachute and its use, apart from such matters as how it is packed."

Lowell, Frederick P. Jiu jitsu. 83p. c1942. Barnes, New York, $1.

Sporting goods dealer, Oct. 1942, p.194. 12 l.

"A step-by-step description of the fundamentals of the 'gentle art' by which an unarmed man is able to defend himself against someone who is physically stronger, and in many cases, against someone who carries weapons . . . Begins with body exercises which are helpful in achieving skill in jiu jitsu tactics and is then

divided into 61 lessons progressing from defensive tactics to offensive tactics. By use of 150 photographs, the reader is able to follow the instructions clearly and accurately."

McCarthy, John J. Fire fighting; a practical guide for firemen and auxiliaries. 254p. Femack Co., 205 W. 19th St., New York.

Fire engineering, Oct. 1942, p.653. ½ col.

"A very practical, instructive handbook for auxiliary firemen. After reviewing the organization of the auxiliary fire corps of New York City the author discusses in detail the tools and fittings of the profession . . . Illustrations are particularly well prepared, and the descriptive matter, precise and clear . . . Chapters on hose and fire streams, fire extinguishers, fire pumps, hook and ladder work, knots, 'taking up' operations, gas masks, first aid, incendiary bombs and other war problems complete the text. In total, it is a very fine contribution to fire department literature."

McPherson, William, and others. Introduction to college chemistry. 608p. 1942. Ginn, Boston, $3.50.

Chemist, Sept. 1942, p.206. ¾ col.

"A first-year text on chemistry which covers an unusually large number of subjects. It is exceptionally well illustrated and is written in a particularly interesting style. A very fine selection of reading references are [sic] given at the end of each chapter, and the dramatic, interesting side of chemistry is stressed to hold the student's interest and give him a fascinating picture of the part which chemistry plays in our present world . . . Includes a list of journals and books which will be particularly interesting to the student of inquiring mind. For its interesting style, its conciseness, and its survey of the field of chemistry, this book is warmly recommended."

Marshall, David. Model railroad engineering. Harper, New York.

Model craftsman, Oct. 1942, p.45. ⅛ col.

"Officially approved and recommended by the New York Society of Model Engineers, Inc., and is the only book on model railroading ever to achieve that distinction, the publishers announce . . . Includes an exposition of standard railroad practices."

Merrill, Frederick T. Japan and the opium menace. 170p. 1942. International Secretariat, Institute of Pacific Relations, New York, $1.50.

American journal of nursing, Oct. 1942, p.1222. ⅛ col.

"This report of a study of the narcotic problem in the Pacific Basin was on the press at the outbreak of our war with Japan and does not discuss possible changes produced by the war. It does present a clear statement of the increase in recent years in the cultivation of the opium poppy and the manufacture and sale of narcotic drugs in those areas of the Far East which were, until the outbreak of the present war, under the jurisdiction of the Chinese and Japanese Governments." *K. S.*

Merriman, Gaylord M. To discover mathematics. 435p. 1942. Wiley, New York, $3.

School science and mathematics, Nov. 1942, p.806. ⅖ p.

"One would not expect to obtain the technical skill often demanded of the engineering mathematics student from study of this text. On the other hand one might well obtain a far better understanding of the aims of mathematics. Because of the end in view, the order of topics often seems unusual, for example, the treatment of integral calculus before the introduction of fractional, negative, and zero exponents. An elementary discussion of groups appears very early in the text, preceding such topics as graphic representation, trigonometry, and coordinate geometry. The appendix contains historical notes and sets of exercises." *Cecil B. Read.*

Scientific monthly, Oct. 1942, p.376. 1 col.

"Although the topics presented are those of the usual college course for non-specialists, the treatment is not stereotyped . . . The outlook is broadly historical, setting mathematics in its just perspective in the general development of culture . . . An appendix of 67 pages contains numerous bibliographical notes, problems of an interesting kind and amplifications of the text. Any student of college mathematics should find much to interest him in this unusual text, even if used only for collateral reading." *E. T. Bell.*

Miller, William J. Introduction to historical geology. Ed.5. 499p. 1942. Van Nostrand, New York, $3.50.

Journal of the New York Botanical Garden, Oct. 1942, p.256. ⅖ col.

"A well illustrated exposition of past geological events, arranged in the usual chronological order, with some suggestion of their significance in the world of today. Neither overburdened with minutiae, nor yet completely skeletal, this volume will provide the student with basic knowledge of the subject. Emphasis, as in most comparable texts, is upon North America." *Charles L. Gilly.*

Moment, Gairdner B. General biology for colleges. 661p. 1942. Appleton, New York, $4.

Quarterly review of biology, Sept. 1942, p.257. ⅘ col.

"Written . . . with three principle [sic] aims in view: to present the material in as clear and logical a way as possible; to give the evidence for the conclusions that are made; and to show the human significance of the subject. These aims are excellent and in many respects the book lives up to them . . . The general plan . . . is good. It starts with discussions of the science of biology in general and the universal characteristics of living things. Several chapters are then devoted to plants, including structure, physiology, and reproduction. Following this, ecological relationships of plants and animals are considered. Then come a number of chapters on animal morphology and physiology including nervous and hormonal coordination. The more general biological problems of reproduction, development, heredity, and evolution are then discussed. The last two chapters are a history of life on the earth and a fairly detailed review of the phyla of the animal kingdom. Lists of 'Useful References' are given at the end of each chapter and there is an extensive index."

Montagu, M. F. Ashley. Man's most dangerous myth; the fallacy of race. Columbia Univ. Press, New York, $2.25.

Natural history, Oct. 1942, p.164. ⅜ col.

"A wartime book directed against the Nazi doctrine of the superiority of the German race. The general reader will not find it easy reading unless he is familiar with several divisions of knowledge . . . The author stands for the literal implication of the Declaration of Independence that 'all man are created equal' . . . He believes that animals and plants can be consistently classified biologically but that it is impossible to classify human beings in any consistent way . . . He maintains that war came in with civilization. Yet he thinks war is not a necessary part of civilization and so civilization need not be destroyed to abolish war. Readers enjoying argumentative writing will find the book provocative." *C. W.*

Morrison, L. H. Diesel engines. Revised edition. 824p. 1942. Diesel Publications, New York, $8.

Aeronautical engineering review, Oct. 1942, p.74. ½ col.

"Covers Diesel engines for electric generation, mechanical power and transportation, and in-

cludes a chapter on aircraft engines. The chief revisions are in the statistics and mathematics presented . . . Each chapter is followed by an examination lesson . . . A complete list of answers is furnished. After giving a general picture of the Diesel engine industry, basic principles of engine design are taken up and the student is told why parts are built in certain ways and how the Diesel engine operates. Slow-speed, medium-speed and high-speed types of Diesel engine are covered. The design of the frame, cylinders, reciprocating parts and valves is given special attention. Fuel, air, lubricating, cooling and starting systems are discussed in detail . . . One chapter deals with engineering fundamentals."

Morrison, L. H. Principles of the Diesel engine. 216p. Diesel Publications, New York.

Oil and gas journal, Oct. 22, 1942, p.60. 11 l.

"The author wrote this volume in an effort to present accurate but simple information on the diesel [sic]. It is not couched in technical language, and it can be understood by anyone. Its first chapter is devoted to an explanation of diesel [sic] terms."

Nicholson, H. H. Principles of field drainage. 165p. 1942. Cambridge Univ. Press, London, 12s. 6d. net.

Nature, Oct. 3, 1942, p.391. ⅔ col.

"Does not deal with the technicalities of surveying or of drainage engineering. His aim has been to interest and assist those who have to devise, advise on, and supervise works of field drainage. He classifies the conditions under which ditches and drains are needed and discusses the different ways in which drains are laid. An account of the moisture properties of soil leads to a general description of the way field drains work. While part of the text is new, several sections are reprints of articles and leaflets published from 1936 onwards. In consequence . . . there is unnecessary and tiresome repetition. A more logical development could have been achieved had the whole been written anew. Nevertheless this little book can be thoroughly recommended to the public for which it is written. It is well illustrated by plates and text-figures and is a valuable addition to the scanty bibliography of an important subject." *R. K. Schofield.*

Nilson, Arthur R. Radio code manual. 170p. 1942. McGraw, New York, $2.

Electronics, Oct. 1942, p.156. ¼ col.

"Comprises 20 lessons on how to learn the radio code, how to send it and how to receive it; how to build simple code machines, lists of international signals; lists of words and code material for practice, sample radio messages, questions and answers leading to a license for restricted radiophone operation and other information of interest to one wishing to become a radio operator . . . Should be a most helpful book . . . Easy to read and to understand."

QST, Nov. 1942, p.22. ⅓ col.

"The name of Nilson on any book connected with preparation for license examinations commands respect, yet we cannot escape the feeling that Author Nilson's attempts at code-training literature shows [sic] an inexplicable lack of understanding of the principles now accepted as basic in modern methods of teaching the international version of Mr. Morse's code . . . Despite this basic lack, the book has a good amount of material for practice and brief but helpful data on operating, such as 'radiotelegraphing tricks of the trade' . . . Twenty-six pages of question-and-answer material in connection with the restricted radio telephone operator permit (which includes no code test) would seem to be out of place in a code manual." *A. L. B.*

Radio-craft, Oct. 1942, p.63. ⅜ col.

"Contains twenty lessons in learning the code, gives instructions for building code-practice equipment and contains a lot of useful information for the beginner . . . Various abbreviations and tricks of the trade that have grown up with the art of radio code are given so that the trainee will be able to understand the use of the advanced methods practiced by operators. Special information required for ship-to-shore communications as well as commercial operating are [sic] included . . . Recommended to radio code instructors of the numerous code classes begun since our entrance into the war, since its use would help to standardize teaching methods."

Radio news, Oct. 1942, p.33. ⅜ col.

"Prepared with one principal thought in mind; i.e., to serve as an instruction reference to potential radio operators, and to take them through the various stages of learning in proper sequence, so that they may learn quickly and thoroughly, and to avoid the old fashioned round-about methods for learning the code . . . Besides instructions in practice material on 'sending and receiving,' the book also has much helpful material on regulations with which the operator must be familiar, instruction of code practice, apparatus, and other information of vital importance . . . We heartily recommend this book to all new students now engaged in the study of radio code or for preparation in obtaining commercial licenses."

Scientific American, Nov. 1942, p.234. ⅛ col.

"Adapted to either self-study or classroom use." *A. P. P.*

Northern Aluminium Company. Anodic, chemical, and paint finishes for aluminium and its alloys. The Company, Banbury, Oxfordshire, England, gratis.

Sheet metal industries, Oct. 1942, p.1516. ⅛ col.

"Deals principally with the various anodic oxidation processes which may be applied to aluminium and its alloys, while outlining briefly the chemical and paint procedures which may be adopted when conditions do not demand such high resistance to corrosion as is given by the former methods."

Norton, F. H. Refractories. Ed.2, revised. 798p. McGraw, New York, $7.50.

Brick & clay record, Sept. 1942, p.54. ½ col.

"One of the new chapters, 'Some Fundamental Concepts of Matter in the Solid State,' discusses the crystalline and glass states, crystal chemistry, and goes into detail about the chemical properties of the silicate minerals . . . The book is divided into 4 sections, Introduction, which gives a general view of the refractories industry and its importance, history, concepts of matter, and literature on refractories; Manufacture, which describes raw materials, and processes used in manufacture; Properties, which discusses fusion points, load bearing capacities, spalling, reaction with slag, etc.; and Use in many industries. Five new chapters have been added to this section on the selection and use of refractories . . . Contains many pictures and charts . . . Should continue to prove especially valuable as a text book and reference book."

Chemical and engineering news, Nov. 10, 1942, p.1479. ⅝ col.

"Reflects the progress in both scientific knowledge and technical art made during the past ten years . . . Unusually well written and comprehensive in scope." *George W. Morey.*

Chemical & metallurgical engineering, Oct. 1942, p.183. ⅔ col.

"New material available since the previous edition has resulted in the addition of 200 pages to this reference volume on refractory materials . . . Style of presentation remains the same."

Foundry, Oct. 1942, p.144. ⅗ col.

"In addition to tables, charts and other illustrations, the book carries an appendix of 12 pages of reference tables and an exceptionally liberal index of subject matter and authors. An extended bibliography at the end of each chapter lists practically every published reference to the subject under discussion."

Heat treating and forging, Oct. 1942, p.527. ½ col.

"A valuable volume for all those concerned

with the buying and use of refractories."

Organic reactions; edited by Roger Adams. v.1. 391p. 1942. Wiley, New York, $4.

Chemical and engineering news, Oct. 25, 1942, p.1326, 1328. ½ col.

"This book, the first in a projected series, will be welcomed by organic chemists. . Twelve type reactions have been selected for critical presentation, following this general pattern: historical introduction and mechanism, scope and limitations of the synthesis, tabular presentation of substances synthesized, experimental procedure for selected members . . . Subsequent volumes in the series will be awaited with interest." *Charles D. Hurd.*

Science, Oct. 2, 1942, p.319. 1 col.

"The first volume of a publication which it is hoped to issue periodically in books of about 12 chapters each, under the general editorship of Dr. Roger Adams, an editorial board and a group of associate editors. The editorial group and the contributors of the individual chapters are all recognized leaders in their chosen fields, on both the experimental and the literary sides. The result, as was to be expected, is an admirable piece of work, constituting an exceptionally valuable contribution to the literature of organic chemistry . . . This first volume consists of 12 chapters, each devoted to a single reaction, or a definite phase thereof, as follows: (1) Reformatsky Reaction; (2) Arndt-Eistert Synthesis; (3) Chloromethylation of Aromatic Compounds; (4) Amination of Heterocyclic Bases by Alkali Amides; (5) Bucherer Reaction; (6) Elbs Reaction; (7) Clemmensen Reduction; (8) Perkin Reaction; (9) Acetoacetic Ester Condensation; (10) Mannich Reaction; (11) Fries Reaction; (12) Jacobsen Reaction . . . Each chapter begins with a Table of Contents, lists in tables the different compounds to which the reaction has been applied and includes full references to the literature. The book is indispensable to every investigator of synthetic organic chemical problems."

Overton, Louis J. Heating and ventilating. Ed.4, edited by Frank Herod. 296p. 1942. Sutherland, Manchester, England, 16s. net.

Industrial heating engineer, Oct. 1942, p.84. ⅓ col.

"It is three years since the third edition . . . The subjects dealt with include central heating by radiators and pipes both by gravity and forced circulation, calorifiers, steam heating, vapour heating unit heaters, Plenum systems, floor heating, pumps, oil-fired heating boilers, ventilation, drying plants, dust and fume exhausting, steam cooking aparatus, district heating and hot-water supply. From this list it will be seen that the author has covered the ground very well . . . To many engineers Mr. Overton is well known as a lecturer on the subjects dealt with in the book, and out of his wide experience he has been able to prepare both text and illustration in a very clear manner."

Paine, Paul. Oil property valuation. 204p. Wiley, New York, $2.75.

Oil and gas journal, Oct. 22, 1942, p.60. 12 l.

Oil weekly, Oct. 5, 1942, p.64. ¼ col.

"Has chapters dealing with the scope of valuation, properties, on proved lands, oil and gas reserves, elements in a valuation, valuation methods, and the examination and report. The aim . . . is to help close the gap especially for younger engineers, with a review of the meaning and scope of valuation in the oil business, the factors which enter a valuation, and the methods of applying these. Questions which arise in valuation practice and the avenues of solution are discussed rather than efforts . . . to provide specific answers and detailed lists of equipment costs."

Parkinson, T. H. Diesel maintenance; servicing the modern transport Diesel. 197p. 1942. Iliffe, London, 6s.

Electrical review, Sept. 11, 1942, p.334. 8 l.

"This book has been developed from a number of articles which have appeared in *Bus and Coach* and makes a valuable contribution to the knowledge of Diesel engine maintenance, particularly in connection with fuel pump repairs. Information is given which the engineer or mechanic would scarcely acquire in several years of ordinary workshop practice."

Mechanical world, Oct. 2, 1942, p.313. ⅝ col.

Pepin, Harriet. Modern pattern design. 253p. Funk, New York, $5.

Practical home economics, Oct. 1942, p.376. ⅛ col.

"A genuine contribution to the field of American design. By means of simple instructions, clarified by drawings and diagrams, it teaches how to prepare a basic foundation pattern and then how to create all types of design in a variety of garments. The directions and drawings are so clear that they stimulate designer, dressmaker, student and teacher to work them out, adapting them to individual design ideas . . . I, an instructor of this type of work, believe the book is a veritable godsend." *Frances F. Mauck.*

Pinches, Harold E. Introduction to agricultural engineering. Ed.2. 90p. The Author, Storrs, Conn., $2.

Agricultural engineering, Oct. 1942, p.332, 334. ½ col.

"Has been developed to meet the need of the large body of agricultural students who take a major in some other field and who may take one or more courses in agricultural engineering, but it is not intended as an introduction to agricultural engineering on the professional level. The approach of the book is analytical, attempting to show methods of thinking and to provide a preliminary acquaintance with a wide variety of problems . . . Divided into two parts. Part I, 'Force Relations,' contains chapters on what forces are and how they act; the action of external forces on bodies, including the effect of off-center forces; the action of internal forces (strength of materials), and the balancing of external and internal forces (proper use of materials in structures). Part II deals with energy states and transformations, and includes chapters on power and work, power and machinery in agriculture, heat (including cooling and refrigeration, thermal conductivity and insulation, and air conditioning), electricity in agriculture, hydraulics (including energy relations of water control and water systems), and levels and leveling."

Pugh, Winfield Scott, ed. War medicine. 565p. 1942. Philosophical Library, New York, $7.50.

Aeronautical engineering review, Oct. 1942, p.79. ⅛ col.

"Symposium of articles that are reprinted from technical journals. Papers on cardiology, hypotension, fatigue and the effects of high altitude acquaint the general medical officer with aeromedicine . . . Evidently intended to give physicians the results and effects of recent changes which have been caused by new weapons and new war strategy."

Drug and cosmetic industry, Oct. 1942, p.434. 1⅔ col.

"A timely and valuable addition to the literature on the subject."

Reichenbach, Hans. From Copernicus to Einstein; translated by Ralph B. Winn. 123p. 1942. Philosophical Library, New York, $2.

Astrophysical journal, Sept. 1942, p.318. ⅔ p.

"Gives the story of natural philosophy in the last four hundred years, the main subject being the philosophy of the relativity theory. The book does not give any new ideas, but it presents an extremely interesting and easily read

history of earlier times and a clear and deep discussion of the ideas of relativity . . . Readers who know Reichenbach's earlier book on the same subject, written before he left Germany at the time of Hitler's rise to power, might have wished for more of the author's own thoughts. As it is, however, the book is an excellent exposition of the generally accepted ideas of relativity which will be read with profit by amateurs and by professionals." *Gunnar Randers.*

Review of scientific instruments, Oct. 1942, p.453. ¾ col.

"A chatty account of the changing views of mechanics and optics, on the grand scale, from Copernicus through Newton, Maxwell, and Mach to Einstein. The facts . . . are known to every high school student of physics—at least before his examinations . . . Altogether, it is an easily read account." *H. P. Robertson.*

Riegel, Emil Raymond. Industrial chemistry; an elementary treatise for the student and general reader. Ed.4. 861p. 1942. Reinhold, New York, $5.50.

Chemical warfare bulletin, Oct. 1942, p.211. ⅛ p.

"An enlargement and revision of the material presented in loose leaf form by the senior author under the title 'Industrial Chemistry of the Amorphous Chemical Industries,' and is prepared expressly for the needs of advanced undergraduates and graduate students contemplating a career in industry."

India rubber world, Oct. 1942, p.90. ¼ col.

"The general scheme of the earlier editions . . . remains unchanged, but much recent information relating to chemical war industries has been summarized to bring the volume up-to-date . . . Covers every phase of industrial chemistry utilized for the production of raw materials as well as the products that advance both peace and war. The materials of construction, the appliances, and the instruments of control used by chemical engineers are adequately described for the student and general reader."

Paper industry and paper world, Oct. 1942. p.778. ¼ col.

"Two chapters have been rewritten; namely, Paper and Pulp and Synthetic Textile Fibers. The chapter on Portland Cement has been brought up to date. The new developments in synthetic rubbers, as well as the advances in working natural rubber, are included in the chapter on Rubber. Likewise, several innovations in the technology of petroleum are treated in the chapter on Petroleum and Its Products. Other changes, although individually smaller in scope, are numerous and enter into the various chapters . . . Profuse with illustrations."

Robbins, W. W., and others. Weed control. 518p. McGraw, New York, $5.

Agricultural engineering, Oct. 1942, p.334. ¼ col.

"Gives a critical review of the various methods of weed control, including the results of recent investigations. There is an adequate treatment of weed production and dissemination of weeds, competition between crop plants and weeds, and association of weeds with soil and crops. The main emphasis is on practical weed control methods, their uses and limitation. The main chapter headings cover the following subjects: Weeds and Human Affairs; Reproduction of Weeds; Association of Weeds with Soils and Crops; Methods of Preventing the Introduction and Spread of Weeds; Principles of Weed Control; Tillage Methods of Weed Control; Competition between Crop Plants and Weeds; Biological Control of Weeds; The Use of Chemicals in Weed Control; Non-selective Contact Sprays; Selective Herbicides; Translocated Sprays; Chemical Soil Sterilization; Temporary Soil Sterilants of a Volatile Nature; Sodium Chlorate as a Temporary Soil Sterilant; Boron Compounds, Arsenic Compounds, Thiocyanates, and other Soil Sterilants; A Comparison of Soil Sterilants; Combinations of Herbicides; Comparison and Application of Weed-Control Methods: Machinery for Applying Herbicides; Special Weed Problems in Grasslands and Turf, Cropped Areas, and Uncropped Areas; and Special Weeds."

Robinson, Pearle Thruber, and others. Before you fly. 332p. 1942. Holt. New York, $1.08.

Aeronautical engineering review, Oct. 1942. p.81. 11 l.

"The authors . . . have been teaching high-school students the outline of aeronautics for several years. They have written this book as a result of their classroom experience. The chapters are short and give the rudiments of practically every phase of aviation. A supplementary teachers' manual is available . . . A glossary and short bibliography are at the end of the book."

Robson, A. G. Engineering workshop principles and practice. Ed.6. 296p. 1942. Emmott, Manchester, England, 8s. 6d. net.

Mechanical world, Sept. 11, 1942, p.258. ⅛ col.

"The introductory chapter has been re-written and new matter added on carbide tools, broaching, and centreless grinding. Reference is also made to hydraulic machine tool operation . . . All the basic workshop tools and methods are dealt with, both for hand and machine work, and there are descriptions and sketches of a great variety of engine and machine details. The book has proved particularly adaptable for tutorial work, having long been adopted by the London County Council for the purpose, and it will certainly be found most useful in engineering and kindred works where training is being undertaken at the present time."

Rorem, C. Rufus, & **Kerrigan,** H. D. Accounting method. 788p. 1942. McGraw, New York, $4.

Journal of accountancy, Oct. 1942, p.373. 1¾ col.

"The most prominent feature of this book, which is a revision of the senior author's earlier editions under the same title, is the extensiveness of the material covered. Although intended as a college text for a one-year course with the conventional number of class meetings, it embraces subjects commonly relegated, though with somewhat more completeness of treatment, to the second year of college work . . . The book well supports the statement in the preface that it emphasizes the 'why' as well as the 'how' and is on that account to be recommended, especially to students of economics who need an orientation in accounting and to all students who expect to take only one year of accounting. In view of the extensiveness and volume of the material the latter group should be confined, as the authors suggest, to upper classmen. Three practice sets and many problems supply adequate exercise material." *Lawrence L. Vance.*

Scobie, H. F. Chemical analysis for the foundry control laboratory. 41p. Professional College Book Store, Univ. of Minnesota, Minneapolis, $1.50 unbound.

American foundryman, Oct. 1942, p.38. 1⅛ col.

"Intended primarily for students interested in the analysis of foundry raw materials . . . Has been used for the past six years by students and foundrymen and, more recently, in defense training classes. The analyses given . . . cover qualitative tests for the presence of chromium, nickel, molybdenum and copper, and methods of analysis for iron and steel, brass and bronze, coal and coke, and slag . . . While this manual was designed for use in foundries, it seems to be of special interest to gray iron foundries."

Sherwood, J. F., & **Chase,** F. T. Principles of cost accounting. 271p. 1942. South-Western Pub., Cincinnati, $1.70.

N.A.C.A. bulletin, Oct. 1, 1942, *section 2*, p.152. ⅛ p.

"Specifically designed for use in intensive courses in cost accounting. It presupposes training in general accounting . . . Divided into ten units, with the introductory unit devoted to a discussion of methods of costing and elements of cost. The next three units deal in order with accounting for materials, labor and overhead. Unit 5 relates to the application of the principles to job costing, Units 6 and 7 to process costing, and Unit 8 to standard costing. Unit 9 deals with miscellaneous cost accounting problems with particular emphasis on the costing of government contracts. The final unit contains supplementary problems . . . for use as review material or for use in expanding the course. This text would appear to answer the need for a short practical cost text for use in short intensive courses in cost accounting."

Skilling, Hugh Hildreth. Fundamentals of electric waves. 186p. Wiley, New York, $2.75.

Professional engineer, Sept. 1942, p.48. ¼ col.

"While . . . primarily designed for students of about the senior college level, it is also very useful for radio engineers. A splendid book on a subject which is fast coming to the front."

Science, Oct. 23, 1942, p.383. 1 col.

"The particular advantage of this book is the fact that it has been designed with the practical applications in view. Thus while the material is reasonably complete the discussion in general is as brief as is consistent with clarity. The book is, however, to be regarded only as an introduction, providing the reader with a sufficient knowledge of the subject to cope with the more involved treatises in which special problems are treated in greater detail . . . The first half . . . is concerned with the general nature of electric and magnetic fields, the study of the static fields being basic to this development . . . The latter half . . . is devoted to a discussion of the Maxwell equations and the propagation of electromagnetic waves. The applications (antennas and wave guides) are confined to the last two chapters . . . Illustrations . . . are well chosen. The collection of tables on the inside covers of the book . . . should be very useful." *M. E. Rose.*

Socony-Vacuum Oil Company. Cane sugar machinery and its lubrication. 72p. 1942. The Company, New York.

Sugar, Oct. 1942, p.45. ⅝ col.

"A handsome publication . . . which . . . is a handbook on the lubrication of machinery in the sugar house, transportation equipment, agricultural tractors, and other mechanical accessories of sugar manufacture. Every station is considered individually—the milling plant, the clarification house, and the boiling house with its pans, mixers, crystallizers, centrifugals, conveyors, and dryers. Separate chapters are devoted to the lubrication of pumps, power units, transmissions, loading and unloading equipment, et cetera. In each case the method of applying the lubricant is indicated, together with the proper grade of lubricant to use. Mill engineers should find this information helpful . . . Embellished by the inclusion of two large folding charts which present in flow-sheet form typical layouts of cane sugar factories employing respectively the compound clarification and simple clarification processes."

Steele, J. Murray. See **Advances** in internal medicine.

Stein, Paul von. See **von Stein,** Paul.

Stocking, Charles H., & **Cataline,** E. L. Arithmetic of pharmacy. Ed.7. 163p. $2.

Drug and cosmetic industry, Oct. 1942, p.437. ⅛ col.

"The authors have presented the subject in a concise and understandable manner. For purposes of review, considerable material dealing with elementary arithmetic has been included. The sections concerned with pharmaceutical calculations are arranged in a logically developing order, the simpler types preceding the more complicated. Reference tables of atomic and molecular weights, and of the specific gravities and percentage strengths of a selected list of substances are included."

Stone, Archie A. Farm machinery. Ed.3, revised. 524p. Wiley, New York, $3.25.

Agricultural engineering, Oct. 1942, p.334. ¼ col.

"This edition has been revised and corrected, and new material has been added, but the same practical methods of study found in previous editions have been retained—methods designed to meet the needs of men who have definite tasks to perform . . . Main chapter headings include the following: Plows; Harrows; Grain-Seeding Machines; Row-Crop Seeders and Planters; Cultivators; Mowers; Grain Binders; Fertilizer-Distributing Implements; Threshers and Combines; Potato Planters and Diggers; Tractors; Tractor Engines; Carburetion System; Ignition System; Cooling Systems; Transmission Systems; Front Axle, Front Wheels, and Steering Gear; and Operation and Maintenance."

Stranger, Ralph. Mathematics of wireless. 215p. 1942. Chemical Pub., New York, $3.

American journal of science, Oct. 1942, p.743. ⅔ p.

"The author endeavors . . . to teach mathematics to 'the man in the street.' He addresses himself particularly to the readers of his former books on certain phases of radio technique, and presupposes an amateur's interest in that field. Starting with the rules for addition of common fractions, the book manages to involve its unfortunate victim in the complexities of the integral calculus in exactly 109 pages . . . The reader . . . will have no dull moment. If he knows nothing about the subject he will probably be delighted; if he does he will alternately chuckle with mirth or fume with indignation. The style is discursive, sometimes rambling, but always vivid. The printing is poor." *Henry Margenau.*

Taylor, Hugh Stott, and others. Molecular films, the cyclotron, and the new biology. 95p. 1942. Rutgers Univ. Press, New Brunswick, N. J., $1.25.

Chemical and engineering news, Sept. 25, 1942, p.1201. 1⅓ col.

"No. 4 of a series of books containing addresses delivered at the 175th anniversary of the founding of Rutgers University. Contains the following: Fundamental Science from Phlogiston to the Cyclotron [by] H. S. Taylor. Molecular films in Chemistry and Biology [by] Irving Langmuir. Nuclear physics and biology [by] E. O. Lawrence. In the short space of 23 pages Taylor gives a bird's-eye view of science over a couple of centuries, the study centering 'largely around advances in chemistry, physics and physiology' . . . Langmuir's paper epitomizes some of his valuable work on surface films, including the behavior of proteins and enzymes when expanded in films . . . Lawrence discusses work emerging from the discovery of the cyclotron, followed by . . . 16 pages of illustrations showing the cyclotron and what is being done with it . . . Should be read by all chemists, physicists, biologists, and physicians." *Jerome Alexander.*

Electronics, Nov. 1942, p.153. ⅓ col.

"Each of these essays is a brilliant and direct treatment of one particular branch of physical development . . . Should prove useful to those who desire a brief, concise survey of some of the more important developments in physics, with an indication of their implication." *B. D.*

Journal of the Franklin Institute, Oct. 1942, p.406. ⅛ p.

"Provides interesting and instructive reading." *R. H. Oppermann.*

Thayer, H. R. Industrial drawing. 195p. McGraw, New York, $1.75.

American machinist, Oct. 15, 1942, p.1211. ¼ col.

"Written primarily for those who wish to study mechanical drawing and should be an extremely handy medium for teaching industrial drawing, especially to adult students. It has been compiled in the form of lessons and arranged to be used by regular classes, but will also be found suitable for those who wish to study alone. Directions are given for drawing lines, the use of the engineer's and architect's scales, protractor and for lettering. Among the subjects covered are dimensioning and symmetry of drawings as well as method of making isometric, oblique and perspective drawings, with each lesson illustrated in detail. Questions and problems are provided in every lesson."

Thompson, D'Arcy Wentworth. On growth and form. Ed.2, revised and enlarged. 1116p. 1942. Macmillan, New York, $12.50.

Animal kingdom, Sept.-Oct. 1942, p.127. 2⅛ col.

"This volume is either a new edition of an old book or a new book containing some old matter, depending on one's point of view. The original edition of 1917 contained 793 pages, the present thus showing an increase of 323 pages, which alone amounts to a presentable volume in itself. There are . . . many new illustrations, and the approach to the subject is unchanged. To do even moderate justice to this book each chapter should be the subject of a separate review. Although the author covers an immense field, which superficially might make the book appear 'spotty' to some, it actually holds together very well if considered as a treatise on the geometry of organism, which, of course, is the author's intent . . . This bulky volume is already on its way to become one of my much-thumbed books. This is probably the nicest thing one can say about an author's efforts . . . To have produced a valuable reference work addressed to both biologists and mathematicians is a true accomplishment of permenant worth." *C. M. Breder, jr.*

Nature, Sept. 19, 1942, p.332. 2¼ col.

"It may seem sufficiently obvious that living tissue is to a large extent subject to physical and chemical laws; if a man falls off a cliff he is as much subject to gravity as a stone is, and the action of nitric acid or excessive heat on skin is much the same whether the skin is alive or dead. Sir D'Arcy Thompson's well-known work, now in its second edition, gives many illustrations that are less obvious. The author finds that at all stages of growth the mode and rate of formation of new tissue are largely determined by the form of the organism at the time; and since this in turn determines the rate and distribution of growth, the development is reducible to differential equations with regard to the time. It would be impossible to give a summary of a book that is itself a summary, indicating prodigious learning . . . It is superfluous to recommend the book to biologists, who will know enough about the first edition; to them the reviewer need only say that abundant attention has been given to later work. But mathematical and experimental physicists will find in it, at the least, extremely interesting reading, and some of them, one may hope, suggestions that will repay further research." *Harold Jeffreys.*

Tolansky, S. Introduction to atomic physics. 343p. 1942. Longmans, New York, 15s. net.

London, Edinburgh & Dublin philosophical magazine, Sept. 1942, p.699. ½ p.

"Contains a complete, qualitative exposition of the major branches of modern physics. In connexion with the building-up of theory; emphasis is placed on experimental evidence and resort is had to mathematical description only when clarity of exposition makes it desirable. Not all subjects . . . are included, but nevertheless Dr. Tolansky has covered a very wide range . . . Very well produced and there are few typographical errors which are not covered by a list of errata . . . This volume essentially provides the student with a sound and comprehensive knowledge of the results and theories of modern atomic physics without burdening him with mathematical detail. The chapters on nuclear physics are specially to be commended . . . Should be warmly welcomed by both students and teachers." *S. R. T.*

Nature, Sept. 12, 1942, p.308. 1½ col.

"The purpose . . . is clearly defined in the forword by Sir Lawrence Bragg. It follows from the belief that a student should be introduced to the great basic advances in experimental and theoretical physics in recent years in his second rather than his final year of undergradute study. The contents . . . are then intended to form a background to the next year of more intensive treatment . . . Has nineteen chapters, and in addition to stock material which every such textbook must include, there are chapters on the quantum theory, the structure of crystals, the wave mechanics, cosmic radiation and the positron and meson, and relativity . . . In brief, the selection of material is interesting and in many respects novel. But the book shows signs of hurried writing. There are a number of errata which have not caught the eye of the proof readers, and should have been added to the list on p. 1. Here and there the text is also rather loose. But the task of writing it under the pressure of present conditions calls for some allowance in such matters, and one may anticipate a new edition at an early date with emendations." *A. M. Tyndall.*

Underwood, Weeden B. Textbook of sterilization. Ed.2, revised. 172p. American Sterilizer Co., Erie, Pa., $3.

American journal of nursing, Oct. 1942, p.1223. ⅛ col.

"Subject material has been amplified and arranged in more convenient order. The illustrations are excellent . . . A bibliography and references would be of value for the teaching of students. The type is clear, the paper good, and the text is easy to comprehend . . . An excellent handbook for the operating room." *Marie C. Ante.*

Van Dersal, William R. Ornamental American shrubs. Oxford, New York, $4.

Natural history, Oct. 1942, p.168. ½ col.

"An excellent book by one who writes with authority based on exhaustive study and wide experience . . . The map of the United States is divided into 32 plant growth regions. Reference to these makes it easy to answer the important question whether or not a shrub will thrive in a certain area . . . Out of some 1300 shrubs in this country, Dr. Van Dersal describes in groups the best of these for all parts of the United States, telling us what the grower wishes to know . . . Nearly 90 exquisite photographs add to the attractiveness of a book that will be greatly appreciated by all who are interested in ornamental American shrubs." *Clyde Fisher.*

Vette, W. A. de. See **DeVette,** W. A., & **Kellogg,** D. E.

von Stein, Paul. Organic reagents in inorganic analysis. 242p. 1942. Chemical Pub., New York, $4.50.

Bulletin of the Electrochemical Society, Inc., Sept. 1942. p.7. ⅖ col.

"A reference work, giving analytical procedures which make use of organic reagents. All told 413 methods are given for 37 elements arranged alphabetically . . . Not intended as a textbook and no mention is made of the theoretical aspects of the subject . . . In nearly all cases one or more references are given at the end of the method to a more detailed procedure. Sixty-five additional references are given in the back of the book . . . Since this volume brings under one cover methods from a great variety of sources, presents the important fea-

tures of each method clearly and concisely, supplies a great many excellent references, and gives a convenient tabulation of reagents, it should be a very valuable tool in the hands of the analytical chemist." *Frederic Kenny.*

Chemical & metallurgical engineering, Oct. 1942, p.184. ¼ col.

"The inorganic elements listed are each given one chapter with the reagents having one paragraph. The directions given usually include preparation of reagent, its use, sensitivity and interferences. In most cases there is included a reference to the original literature and it will occasionally be found that this must be consulted for some further detail such as concentration."

Journal of chemical education, Oct. 1942, p.500. ⅓ col.

"A compendium of organic compounds which yield indicative reactions with inorganic substances . . . The procedures for the more important methods are given in full as regards the care and technic required; methods of less importance are mentioned only briefly. The preparation of reagent solutions and a partial summary of reagents and their interferences in detecting metals are given in the Appendix . . . Well indexed. No attempt was made to include or describe the chemical reactions, affinities, and formulas of the organic reagents . . . Will be a useful adjunct to every analyst; those interested in the theoretical aspects of the subject of metallo-organic analytical methods will need to consult the treatises and original articles, many of which have appeared within the past ten or fifteen years." *John H. Yoe.*

Metal finishing, Nov. 1942, p.612. ½ col.

"A complete reference work of organic compounds which yield indicative reactions with inorganic materials. Included are the pertinent facts connected with each determination under consideration, as well as reference to the original articles from which the material has been drawn . . . At the present time there is no treatise covering this subject with as much completeness. Information that is most vital to the analytical research chemist is incorporated in this book."

Wallace, Andrew. Aircraft engine trouble shooting chart. Henley, New York, 75c.

American machinist, Oct. 15, 1942, p.1211. ⅛ col.

"This 22x32-in. aircraft engine trouble shooting chart for all types of engines is arranged so that one can easily trace and learn the proper way to correct engine troubles. Troubles are diagnosed through the medium of a 'sound section' on the chart, which in turn identifies the troubles in smaller sections arranged around the sound section; then, all the sections are connected with guide lines to enable one to quickly employ the proper procedure for their correction."

Flying, Dec. 1942, p.124. 7 l.

"A reference chart arranged so that a novice (or trained mechanic) may quickly learn to identify and correct engine troubles. Expertly prepared, the chart's main headings cover noise or symptoms, probable trouble, probable cause and remedy."

Modern machine shop, Nov. 1942, p.348. ⅛ col.

"Based on the results of years of practical experience . . . Arranged so that any ordinary person can easily trace and learn the proper way to correct aircraft engine troubles . . . The chart is said to be especially useful for aircraft engine mechanics, airports, schools, and all fields of the Army and Navy air forces."

Steel, Nov. 2, 1942, p.128. ⅛ col.

Warner, J. C. See **Leighou,** R. B.

Wendt, Gerald. Chemistry. 300p. $2.25.

Scientific American, Oct. 1942, p.186. ⅛ col.

"Not chemistry made easy—it can't be—but chemistry made easier. Intermediate between the popular works which make chemistry easy simply by skipping what's hard (and usually important also) and the more complex classroom texts . . . A book containing the main substance of the typical first-year chemistry course as taught to college students (part of a survey course), one requiring real study, but from which the outside reader may garner a much better than sketchy background in chemistry." *A. G. I.*

Willard, Daniel E. Adventures in scenery; a popular reader of California geology. 438p. 1942. Jaques Cattell Press, Lancaster, Pa., $3.75.

Nature magazine, Aug.-Sept., 1942, p.389. ⅛ col.

"The author has gathered from a wide variety of sources, and from the studies of specialists, the facts of California's geological past and present. He has delved into what has made the scenery of the Golden State what it is. Finally, he has presented these facts as simply as possible so that they may be interesting and informative to the lay reader and to the student . . . An excellent glossary defines essential scientific terminology, and a bibliography provides references . . . This is the sort of book that makes scenery significant to the beholder and geology significant to the lover of the outdoors."

Willhite, T. A. Newspaper advertising for the retail store. 56p. McKnight, Bloomington, Ill., $1.

Editor & publisher, Sept. 19, 1942, p.15. ¼ col.

"Mr. Willhite . . . said he wrote the book with the idea of having in condensed form the specific data which every newspaper advertising solicitor needs occasionally, so the solicitor could back up his conversation with 'something in print' . . . Contains . . . 19 . . . full page illustrations. Each subject is held to one and two page discussions."

Williams, H. Mechanical refrigeration. Ed.5, revised. 564p. 1942. Pitman, London, 30s. net.

Mechanical world, Sept. 4, 1942, p.326. ⅔ col.

"A comprehensive work for the owner and user of refrigeration plant . . . Well illustrated by photographs and line drawings; there are numerous tables of data and several folding plates of plant layouts and charts."

Williams, Samuel R. Hardness and hardness measurements. 558p. 1942. American Society for Metals, Cleveland, $7.50.

Metals and alloys, Oct. 1942, p.832, 835. 1⅓ col.

"It is regrettable that the first book on this subject written by a physicist fails completely in attaining its goals. According to the author's preface, 'This treatise on hardness and hardness measurements is a pioneer attempt on the part of a physicist to clarify concepts of hardness and to improve the methods for measuring hardness, *if such a property exists.*' (Author's italics) The author has been notably successful in assembling a considerable number of references to investigations reported prior to 1900. Quotations and conclusions from these venerable works are used freely without attempting to evaluate them in the light of more recently acquired knowledge. An extensive bibliography . . . includes references to the more recent investigations, but these apparently were used sparingly in preparing the text. Descriptions of commercial hardness testing machines and their operations are covered rather completely in 15 pages of catalog type of information on the Brinell test, 17 on Rockwell, 20 on diamond pyramid tests, 7 on Monotron, 11 on scleroscope, and 20 on Herbert pendulum. However, the section on Brinell tests does not mention the use of tungsten-carbide balls or the time of load applications . . . This book falls far short of the high standards set by recent A.S.M. publications of this type." *R. H. Heyer.*

Wolfenden, Hugh H. Fundamental prin-

ciples of mathematical statistics; with special reference to the requirements of actuaries and vital statisticians. 379p. 1942. Macmillan, New York, $5.

American journal of public health, Oct. 1942, p.1175. 1⅝ col.

"Attempts to assemble and coördinate those portions of the theory and applications of mathematical statistics which are needed by actuarial beginners and by qualified actuaries. Essentially it is an exposition of the subject of probability in the classical manner, with emphasis on the theory of errors and least squares . . . The Bibliography of 367 references is divided into two parts to denote historically important and currently useful publications . . . Some of the more recent advances in mathematical statistics, as confidence limits, testing of hypotheses, analysis of variance, are mentioned only briefly . . . Should be an exceedingly useful reference manual to the vital statistician, since many of his special tools are given more adequate treatment here than in most works on mathematical statistics." *John W. Fertig.*

Woodbury, David O. What the citizen should know about submarine warfare. 231p. 1942. Norton, New York, $2.50.

Scientific American, Nov. 1942, p.234. ⅛ col.

"A sound background of non-technical information on the submersible and its uses; on the measures developed against it; on its history, its torpedoes, and how they operate. A description of life below the sea, the men who live it, how they are trained, with an analysis of submarine warfare from 1914 to now—a complete understanding of the entire submersible problem, vital to every one who would understand the threat and deadliness of the submarine menace and its potentialities." *A. D. R., IV.*

Wooldridge, W. R. War gases and foodstuffs. 50p. 1942. L. Hill, London, 2s. 6d. unbound.

Chemical age, Oct. 10, 1942, p.321. ⅖ col.

"Deals in a most effective manner with the dangers (as far as they can be visualised) to which food supplies will be exposed in a gas attack and the approved methods of counteracting them."

Chemical trade journal, Sept. 18, 1942, p.265. ½ col.

"The term foodstuffs is given its widest interpretation, a great deal of the work being devoted to the effect of war gases upon farm animals and the protective and precautionary measures best taken . . . Also covers the effect of gas contamination on all classes of foodstuffs in the usually accepted sense of the term and the measures necessary for decontamination, illustrations being given of special decontamination buildings erected in various parts of the country. Detection methods (subjective and chemical) for the gases are given in good detail."

Industrial chemist, Oct. 1942, p.402. ⅔ col.

"Public interest in the subject of gas warfare has waned to some extent in recent months, but this is no excuse for those in responsible positions in any way to lessen the efficiency of precautions against this form of attack. This book, which collects in a handy form information on all aspects of the action of war gases on foodstuffs, should, therefore, prove useful to those engaged in the industry, who have responsibility for the protection of foodstuffs."

Wylie, C. C. Astronomy, maps, and weather. 449p. 1942. Harper, New York, $3.

Aeronautical engineering review, Oct. 1942, p.80. ⅓ col.

"The combination of subjects, while fundamentally new, is natural and gives the pilot information on the sky, the clouds and the earth as seen from above."

American aviation, Oct. 1, 1942, p.27. ¼ col.

"Presents pertinent background material, as well as practical information, to the prospective airplane pilot . . . Photographs, diagrams, charts, and maps are included."

American journal of science, Nov. 1942, p.828. ⅝ col.

Astrophysical journal, Sept. 1942, p.319. 1⅛ p.

" 'With the entry of the United States into the war on December 8, 1941, the Army Air Corps inaugurated a great plan to train hundreds of thousands of young men for future service as pilots, navigators, and bombardiers for our fighting aircraft.' This is the opening sentence of Dr. Wylie's Preface . . . Dr. Wylie's book has been prepared at the request of the Army Air Corps Flying Training Command in order to meet the requirements of this course." *O. S.*

Science, Nov. 13, 1942, p.449. 1⅔ col.

Scientific American, Nov. 1942, p.236. 11 l.

"Covers subjects never heretofore grouped in one book: celestial sphere, constellations (14 excellent sky maps), motions of the earth; weather, clouds, forecasting; maps, time, celestial navigation; a fair coverage of general astronomy —enough for practical and background purposes." *A. G. I.*

Sky and telescope, Oct. 1942, p.16. 1⅓ col.

"Written to be used as a text in the pre-flight training classes now being established in high schools and colleges. At what point in this training program the book will be used is not clear, but presumably it is during the first or second year of college work . . . Consists of four main parts. In the first, which is of six chapters, the characteristics of the celestial sphere, co-ordinate systems, constellations, telescopes, the earth and its motions, and the seasons, are all briefly considered . . . The second part, containing three chapters, introduces the elements of practical meteorology through 'Weather,' 'Clouds,' and 'Weather Forecasting' . . . Part three, also consisting of three chapters, presents the fundamental problems of practical navigation . . . The remaining eight chapters constitute the fourth part . . . These chapters contain general descriptions of the heavenly bodies . . . The large number of pages attests to the quantity of material in the book, and to the profuseness of its illustrations and diagrams . . . Although prepared in a short time, the text is well-organized and practical—it will serve the purpose for which it was written." *Fletcher G. Watson.*

Western flying, Nov. 1942, p.116. ¼ col.

Yater, Wallace Mason. Fundamentals of internal medicine. Ed.3, revised. 1021p. Appleton, New York, $9.

Drug and cosmetic industry, Aug. 1942, p.193. ⅜ col.

"Designed primarily to make readily available in simple form for student and practitioner the essentials of the vast subject of internal medicine. Fractures, dislocations, obstetrics and strictly gynecological diseases are excluded. In the specialties of otolaryngology, ophthalmology and dermatology only such information is included that an internist or general practitioner should possess. A section on dietetics has been included. In general an attempt has been made to present the minimum amount of knowledge of clinical medicine a medical student or general practitioner should have at his fingertips."

Zim, Herbert S. Parachutes. 252p. 1942. Harcourt, New York, $2.50.

Aeronautical engineering review, Oct. 1942, p.79. ⅖ col.

"Uses of parachutes in war and in peacetime pursuits, details of their making and the scientific principles upon which they work are the subjects of this book . . . Chapters are devoted to the training of parachutists and paratroops and the employment of parachutes by all branches of the armed services of the United States. How parachutes have been developed for peacetime service in a wide range of occupations is given a prominent place in this study . . . Progress and changes in the design of parachutes and their harness and accessories are traced."

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Errata in Volume 8

Allegheny Ludlum Steel Corporation (p.161). In line 11, for "discusison" read discussion.
The following has been corrected in making the Author Index:
For "Houghton, P. A." (p.149) read **Houghton, P. S.**

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